FIRE INSURANCE RATES AND STATE REGULATION

BY

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REPRINTED FROM
THE QUARTERLY JOURNAL OF ECONOMICS
VOL. XXVIII, MAY, 1914

THE

QUARTERLY JOURNAL OF ECONOMICS

Published by Harvard University

Is established for the advancement of knowledge by the full and free discussion of economic questions. The editors assume no responsibility for the views of contributors, beyond a guarantee that they have a good claim to the attention of well-informed readers.

Communications for the editors should be addressed to the Quarterly Journal of Economics, Cambridge, Mass.; business communications and subscriptions ($3.00 a year), to the Harvard University Press, 2 University Hall, Cambridge, Mass.

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I

Introductory

Rates in fire insurance, in common with rates for other services which vitally affect the public, are now the subject for much discussion and legislation in the United States. The determination of fair rates in fire insurance is peculiarly difficult in this country for the following reasons: first, on account of the complexity of the elements entering into the cost of the service; second, on account of the past and prospective presence of conflagrations; third, on account of the legal status of insurance in the United States. A few words of introduction will serve to make more clear these peculiarities.

First, as regards rates and cost, two methods of determining fire insurance charges have been followed. In the early history of fire insurance, buildings were divided into the two classes of frame and brick, upon which a rate on the basis of past experience and per-

sonal judgment was determined. In the evolution of rate-making, distinctions came to be made between classes of buildings within these two general classes. Special agents, acting with local agents, made all the rates. Later, selected representatives from companies made the rates for all companies for a city. Little effort was made to analyze the factors entering into each risk. It was a method of applying personal judgment and interpreting past experience. Altho the result was in some cases satisfactory, yet the general disregard of the good and bad features in a particular risk did not sufficiently differentiate the particular risk from the fictitious average risk. Later came the second method, under which various systems of schedule rating were developed in which an analysis of the component elements in the risk is made. The application of these schedule systems is now very generally made by organizations independent of the insurance companies.

Fire insurance is an indemnity for the whole or partial loss of property, but the cost of this indemnity cannot be determined with accuracy at the time the indemnity is sold. That is to say, if the cost of the service theory should be accepted as a proper basis for determining the charge, there is no assurance that the price charged will be equal to this cost, since so many variable factors affect the cost.

Whatever the merchant sells has been bought in the open market, and his selling price is ordinarily determined by adding the cost of freight, rent, clerk hire, fuel and light, together with such profit as he may regard as adequate. A manufacturer buys his raw material and by adding cost of labor, operating expenses, interest on his plant and his profit loading, he fixes the price at which he desires to sell his manufactured goods. A common carrier knows approximately what it costs to

transport passengers or merchandise by water or by rail. Whoever has anything to sell attempts to fix in advance the price of what he sells so that he may derive a profit. But the insurer sells neither merchandise nor labor; he sells promises to pay in the form of a contract of indemnity against loss caused by the happening of an uncertain event. But when he sells his contract of insurance — or more properly speaking his bond of indemnity — he has no means of knowing whether he will be called upon to pay the stipulated indemnity in whole or in part.

Supply and demand do not affect the price at which this indemnity is sold in the same manner in which supply and demand affect the price of commodities. The losses which occur after the price is determined are the final determinants in fixing this price, and these losses are beyond the control of the insurer. In certain cases, as in preferred risks upon which losses are very likely to be low, a condition of surplus of supply of insurance may exist. This condition may tend to establish inadequate rates. On the other hand it may happen that the supply of insurance for other classes of undesirable risks tends to be below the demand. The result is that the forces of demand and supply do not establish that equilibrium which produces fair prices for all classes of risks.

In the second place, conflagrations introduce a very large disturbing factor in any assumed system of rates which seem at the time equitable.

In the third place, insurance in the United States is a subject under the complete regulation of the states, having been declared neither commerce nor an instrumentality of commerce by the United States Supreme Court. The significance of this fact for rates is that there is a strong tendency on the part of states to estab-

lish the state as the geographical unit for rate making purposes. This may seriously prevent the proper working of the law of average, especially in a country where conflagrations are yet common.

II

The Theory of Fire Insurance Rates

On the part of the public there is very little accurate knowledge as to the nature and purpose of fire insurance. The average person considers it in much the same light as he does any common subject of sale and purchase. He assumes that he may go into the market and purchase as much or as little as he chooses at so much per unit of measurement. He confuses it with life insurance, concerning which he has gained considerable knowledge during the last decade. He purchases as much life insurance as his saving power enables him. But fire insurance has no direct relation to saving, but is always a question of indemnity for property loss. The individual demand cannot be measured in fire insurance by the ability and desire to purchase, but must be limited by the value of property possessed; whereas in life insurance full operation of effective individual demand may be permitted, except as it is limited by the physical condition of the applicant, or a maximum limit of insurance in a particular company. That is to say, an individual in normal health could purchase without injury to the business or to other people all the life insurance he desired; but the amount of fire insurance which he should be permitted to purchase is limited by the value of his property.

The simplest statement of the theory of fire insurance rates is that the rate is a resultant of the property loss, the expense element, the maintenance of the reserve

required by the various state laws and a provision for a return on the capital invested. The interest rate is over considerable periods of time a relatively constant factor. It is the property loss element in the final cost which fluctuates. This property loss is for any one year an indeterminate and largely an independent variable. The burning rate is always in process of change, and the range of it on an annual basis is sometimes very great. The fluctuation for a year in the total loss ratio may vary as much as 20%, and the loss ratio on particular kinds of property, or upon all classes of property in particular regions, may vary much more. Yet rates for the future — since fire insurance is a service sold for future delivery — must be determined. The only correct method is an analysis of the numerous hazards which make up the fire loss. Past experience must, therefore, play a large part in supplying a basis for this analysis. The true measurement of fire hazard is the placing of every risk in its proper relative position, and while this position of relativity may change from year to year, yet each factor contributing to the hazard should, so far as is possible, be in the proper relation to the total charge.

It is a common doctrine in determining prices that each product should bear its total costs of production. Since insurance is an element in the total costs of producing a product, it is assumed by many that industries should be classified as the only method of assessing this cost of insurance. There is also another aspect to classification, namely, that the class should be limited to the property in a particular state. Both these ideas contain elements of danger as well as impracticability. If the first idea means that a particular business, as for example drug stores, should be placed in one class, for purposes of determining the insurance charge, the

contention cannot be supported either on grounds of theory or practicability. It is true that classification has some value in arriving at insurance costs. Experience of losses on classes of property may aid in deciding upon base rates to which the more completely analyzed elements in the risk may be added in arriving at the final rate. Then, too, certain kinds of property have not had a system of schedule rating worked out for them; nor is it important to apply a minutely analyzed system to those kinds of property, as, for example, dwelling houses, which have a large degree of uniformity. In such cases, rates based upon the general experience of such classes of property may when properly applied have no territorial, personal, or property discrimination in them.

It can be accepted as true and desirable that each product should express in its selling price its total costs of production, but the insurance element entering into the price of the product can be determined in a more accurate manner than by mere classification. What is sought to be measured is the degree of likeness or the amount of sameness in the quantity of the hazard in the individual risks. Fire hazard is not as a totality inherent in the property itself. It is made up of internal and external elements, as well as intangible factors. These may be enumerated: the character of the construction material; the character of the occupancy; the manner or use of the occupancy; the character of the surroundings, or the exposure; and, finally, the character of the owner or occupier of the buildings. This last factor in the hazard is known as the moral hazard and manifestly is difficult to appraise in its true bearing on the fire rate. It follows, therefore, that all drug stores, or all wholesale dry goods establishments cannot be said to have a unit, unchangeable expression of their

hazard. A wooden drug store in an outlying district may have quite as low a hazard as a brick one in a congested district, or a hardware establishment may be equal in its hazard to some one dry goods establishment.

If the hazard of two risks of a certain class, as for example drug stores, is approximately the same, this is a matter of accident. It is quite as possible that the difference in the amount of hazard of two such risks will be greater than the difference in hazard between one of these risks and a risk in an entirely different business. It is, therefore, the elements that go to make up the hazard which should be the starting point of analysis and not the class of risks themselves. Nor would such a method of procedure vitiate the economic principle that each product should bear its total costs of production. Indeed it will most readily and accurately determine its true total costs. Nor is the least significant result of such a method of determining insurance costs that it will have a powerful effect in reducing the unnecessarily high losses by fire in the United States. The total hazard thus determined of each risk is composed of numerous elements. Each factor in the building contributes to the hazard or reduces it, and each property owner knows how to reduce his rate by improving the condition of his property. The method also establishes a time basis for classification. Public officials supervising insurance then have a basis upon which to decide the equity of rates among classes of property. Like hazards should bear like rates, but the similarity of hazards cannot be determined from the starting point of the particular business classified according to its product.

Confusion often arises in this particular by an unwarranted assumption of similarity between fire and life insurance rates. The chief elements of the risk in life

insurance are found in the mortality rate and the investment rate. The burning rate in fire insurance corresponds, so far as there is any correspondence, to the mortality rate in life insurance. There is, however, greater homogeneity among insured lives than among insured property. In life insurance, a selection of normal lives has been made by the medical examination, and while these lives lend themselves to certain classifications upon the basis of sex and age, and while experience of each insured group shows certain variations from the assured rate of mortality, yet this original selection of normal lives assures a large degree of homogeneity in the group. In fire insurance there are many kinds of property, differing not only as to construction but also as to the particular use made of it and the protection from fire about it. Heterogeneity, not homogeneity, is the characteristic of the fire insurance risk.

The basic principle which is the foundation of equitable rating between persons and fair rates to the public is then the analysis of a hazard into its component parts. There is thus established a standard for each part and a scale of charges and credits for any deviation from this standard. Under a developed system of schedule rating, a rate is made up of plus and minus elements, and a true basis of classification is thus supplied. It must be admitted that such a method of measurement is not absolutely complete. There is in the system of schedule rating a basis rate which is said to represent the unanalyzable elements in the hazard, or the residuum of hazard. But this is not a vital objection. The method is infinitely superior to a rough and ready one of assessing fire charges on the experience of past years or series of years, either by the officials of the company for the whole country, or by groups of

companies' agents for a particular territory. It must also be recognized that the public could not and does not demand such nicety in the analysis of other total costs of products in order to justify the demanded price from the sellers of products and services. It is only recently that the demand has been made upon railways for a justification of their demanded price. These rating schedules are being continually improved and must commend themselves increasingly to the public and its insurance supervisors.

Granting that such a theory of determining rates should be accepted, the problem is not yet solved, because it leaves out of consideration the geographical area upon which the experience should be based. In pure theory, an analysis of the fire hazard of a state or any other local political area would arrive at the exact cost of the fire protection; but it would not be insurance. True insurance is not only a calculation of a risk but a distribution of it. The area of distribution must be sufficiently wide to make the burden of cost upon each less than he would bear as an individual. The single risk, or even a limited number of risks made into a class, as might be true in a single state, is a risk with no insurance.

Every purchaser of insurance should benefit from distribution, and the rarity of his risk or the size of it ought not to interfere with this privilege of a broad distribution. The rate for the particular individual may be ten times as great as the average rate for the country or even higher than the average rate for the class in which he is located; but his rate still is lower because he belongs to a group whose rates are based upon a wide distribution.

If a state should insist, as undoubtedly it has the legal power so to do, that rates should be based upon

the actual experience within the state, it must realize that this may mean very heavy burdens, and so long as conflagrations are prevalent, impossible burdens. It could not claim the exclusive state benefits of years of low rates within the State, and then when heavy losses occur, transfer its rates to a national basis. If, in a selfish manner, it refused to consider national losses in making its state rates, it would have little ground in morals to expect assistance at the time of a heavy loss within the state, and even less good grounds to increase rates upon all property within the state after the heavy loss occurred. There is little reason to argue for a community of state interests in this respect as contrasted with the community of national interest. It does not follow that a state which has by careful supervision over fire losses, good building codes, fire prevention devices, and other measures reduced the fire loss will be penalized by the carelessness of other communities. The system of analyzing the amount of fire hazard by its credit and debit items removes this objection.

The aggregate premium collected constitutes a fund from which all losses and expenses must be paid, and a sum set aside each year to constitute the unearned premium reserve. This unearned premium is a sum held in trust by the company for its policy-holders. It represents that portion of the protection paid for, but not yet earned. After these sums are deducted from the aggregate premium, the remainder constitutes the " underwriting profit." This balance includes both interest and profit. Some years show an underwriting profit and some years a loss. During any one year, some companies show a larger profit than the average profit, and in some cases no profit at all for the year. No one year nor any one company affords a basis upon

which to reach a conclusion either as to profitableness of fire insurance, or as to the proper rates for the succeeding year. For example, the underwriting profit for the past several decades in fire insurance has been negligible. Whether the expenses are too high, or whether the rates are insufficient, are entirely different questions.

III

Conflagrations

Conflagrations, from which most European countries are free, are a very disturbing factor in making fire insurance rates in this country. The general absence of conflagrations in Europe as compared to the United States is due to the following causes: difference in the character of the construction material; difference in the building codes; difference in laws referring to the use of buildings and the occurrence of fires.

Our strong individualism, as well as the economic interest involved, has made us unwilling to submit either to strict regulations governing the construction and use of buildings, or to the inquisitorial methods often followed in order to determine responsibility when a fire occurs in many European countries. We have believed it has been cheaper to build and burn, then build again, than to build substantially. If a tenant or occupier were brought before a magistrate to show cause why he should not be penalized for permitting a fire to occur in a building, the average citizen's most cherished ideas of liberty and freedom would be violated. Yet a fire in any city is not a private matter. The public interest involved becomes more apparent with the growth of cities and the enormous losses resulting from recurrent conflagrations.

No other factor suggests so strong an argument against the practicability of making rates upon the experience of a particular state, whatever may be the additional weakness of the plan on purely theoretical grounds. The frequent disposition of the uninformed to quote the practice of European cities in this respect proves nothing when applied to the United States. It is doubtless true that the officials of the companies have in the past distributed this conflagration loss by crude methods, but distributed it has been. It is very questionable if the states will be willing to provide for this conflagration loss, either if they make or closely supervise the rates. The citizens may readily admit the justice and necessity of distributing the loss after a conflagration occurs in their own state, but not a small portion of the late criticism against fire rates has arisen as a result of the distribution (in part) of the heavy losses due to the San Francisco and Baltimore fires.

IV

State Legislation

There remain to be considered some of the important characteristics in the practice of rates as affected by state statutes. There are laws of three sorts in force in many of the states, which may be taken as an expression of what rates should be in practice according to the legislators, as compared to what they should be in theory. These laws are the valued policy law, the anti-coinsurance law, and the anti-compact law.

(1) The valued policy law is in brief that the value expressed in the policy shall be taken as the true basis of settlement. The company must pay the sum stated in the policy. This would seem upon first consideration to be quite proper, since in a contractural relation-

ship between two parties there should be no doubt concerning the principal thing to be delivered. But a fire insurance contract is a personal contract of indemnity. The value of property is continually changing, and it is not always an easy matter for the insurance company to determine the original value of the property, to say nothing of its changing values. This would involve a very large expense for inspection. The insurer must expect the utmost good faith on the part of the insured in making the contract. Again, it is another fundamental characteristic of all insurance that the insured shall in no way gain or make a profit from the insurance contract. It therefore happens that in those states where such a law is in force an inducement is offered to over-value property and also an inducement to be careless in the use of the property. Evidence is not wanting that a number of cases of wilful destruction occur every year and during the time of an industrial depression the number of such cases increases.

The legislator and the public, in enacting valued policy laws, directed their attention solely to the conditions at the end of the contract, that is, when the fire occurred. They desired to be assured that the loss in full would be paid, and doubtless the practice of some companies in evading payment for losses is largely responsible for these laws. Yet no honestly-managed company has any objections to paying the full indemnity. The means used to correct an injustice suffered by some property owners have not worked to the advantage either of the insured or insurer. If legislators had considered the conditions of the fire insurance contract as a whole, and not the conditions at the termination of it, they would have recognized that valued policy laws increased the cost of insurance in two ways. First, there is the added expense of appraising the

property in order to avoid over-insurance. This expense must be borne by policy holders. It must be remembered that but a small per cent of insured property is destroyed, and the additional appraisal expense is borne by all for the sake of the few whose property burns. Second, in the actual working of the law, appraisals are often not made carefully, and many property owners are able to secure insurance in excess of the value of the property. This means that the honest property holder who insures his property has an additional charge levied upon him by the dishonest property holder, who thus uses insurance as a source of gain and not as a means of indemnification.

The insurance charge in this respect resembles a tax. If the rate of taxation is determined upon the true value or any specific percentage value of the property, it is essential for equity in payments that each shall return this value of the property. If any one person does not do so, the remainder will be compelled to bear so much more tax, since a certain sum of money must be raised. Similarly, if an individual collects $1000 more fire insurance than his true loss, this sum must come from the premiums of others. Fire insurance is not a commodity, like wheat, which can be sold at a certain price per unit and which can be purchased in any quantity by any buyer without doing an injury to other buyers. No great public injury is suffered when an individual purchases ten bushels of wheat when he needed only five bushels. But the same individual cannot purchase $1000 worth of insurance when he needs only $500 worth without doing an injury to all other purchasers of insurance.

(2) Coinsurance is a method under which the property owner has his losses paid only in the proportion that the amount of the insurance he purchases bears

to the amount of the insurance which the company normally expects or requires him to buy. That is to say, he becomes a coinsurer for himself with the company.

The anti-coinsurance law is, therefore, one which prohibits an insurance contract from containing a clause which makes the insured an insurer with the company in case his property is not insured to a certain per cent of its value. It is just as important that property be not under-insured as that it be not over-insured. To prohibit such a clause is to make impossible the measurement of fire hazard and the apportionment of it. There must be some one uniform ratio of insurance to value. It makes no very great difference what this ratio is. In practice it has become 80 per cent. Some property, however, cannot be insured at 20 per cent of its value and other property at 80 per cent of its value, if the charge is to be equitably apportioned.

The prevalence of such a law has worked great injustice to small property holders in favor of owners of large and diverse property. The owner of the shop, the store, or the farm is prompted by his own interest to insure his property for a sum near to its true value, since the loss of it means much to him. But the owners of large and distributed manufacturing property, or large mercantile properties, and other properties which are frequently housed in fireproof and separated buildings, and in cities with good water and fire department protection has no such inducement. The losses of the latter are likely to be only partial, and a small amount of insurance gives a large amount of protection. Insurance for 30 per cent of the value of the property may in the latter case protect as well as 80 per cent of the value of the property in the former case. It is desirable that

the owners should each insure to the same value, and in case a class of owners do not, they should become coinsurers with the insurer for the difference in value between the insured value and the stated basis, as for example, 80 per cent. There is no other one cause of so much discrimination as the practices encouraged by these anti-coinsurance laws.

It must be understood that a coinsurance clause has no effect upon the amount due to the insured in the event of a loss, large or small, if the amount of insurance carried by him equals or exceeds the percentage of the whole value of the property insured which the coinsurance clause requires. The clause is of no effect when there is a complete loss, or when the damage equals or exceeds the percentage of the total value insured which is stipulated in the coinsurance clause. It is only when there is a partial loss which destroys a smaller percentage of the value of the property than that stated in the coinsurance clause. The importance of the clause is increased by the fact that the greater number of losses are partial losses. The relation of this anti-coinsurance law to the valued policy law is important. The practical operation of the former law is to encourage the under-insurance of property. In either case the cost of insurance is increased, and inequitable rates as regards different states and different individuals in the same state result.

(3) The third set of laws which illustrate the difference between insurance rates in theory and practice is the anti-compact laws. These laws are very common in the insurance legislation of the States. In brief they prohibit the companies from agreeing upon uniform rates. They express the firm conviction on the part of many people that competition is always desirable. It is assumed that any evidence of a uniformity

in charges for goods or service is proof of monopoly. It is not recognized that the companies have little control over the chief element in the cost of the service, that is, the burning rate.

There are two other elements in the cost of the service besides the burning rate, viz., the expense element and the investment return. Over the expense element the company does have some control; but it has very little control over the element of investment. The interest rate is largely independent of the companies. Thus two of the three factors which finally determine the rate of charge are largely independent of particular company influence. Nevertheless, competition has sought to be enforced by prohibiting companies from acting jointly in the measurement of fire hazard, and agreeing upon a common basis of rates. Reckless operation has thus been encouraged on the part of some companies. Rate wars have occurred. Large fluctuations in rates have been common. Doubtless many individuals have benefited at these times of rate wars by securing a lower rate. But the practise has also made possible discrimination between the large property holder who could bargain more successfully, thus defeating the assumed purpose of anti-trust laws. Not least, such laws have failed to reduce the fire loss.

Notwithstanding the numerous laws which have been enacted in different states to prevent monopoly, the evidence against the existence of monopoly in fire insurance is undoubted. The late realization of the potential danger of monopoly, due to disclosures of evils experienced, has made the public super-sensitive and lacking in discrimination as to evidence of monopoly. Some states have enacted anti-trust laws under which insurance companies could be prosecuted for the most trivial agreement in regard to methods of con-

ducting the business. Missouri passed a law which stated that the use by two companies of the same schedule of rates should constitute a violation of the anti-trust law, notwithstanding that these schedules were made by an independent organization not engaged in the insurance business. The companies generally prepared to withdraw from the state, when they were informed that this agreement to withdraw was also a violation of the anti-trust law. It was finally agreed that the law should not be enforced, pending an investigation of the whole subject of fire insurance by a special commission.

In those states and countries where no anti-compact laws are in force, there is no real evidence of monopoly. New companies are organized. There is at present the greatest need to compel companies to agree upon rates and to enforce an adherence to such rates, derived from past experience and a proper analysis of fire hazard. Nor would such an enforced agreement mean that the fire charge would be stationary, nor that approval would be given to a stated expense element in the final charge. Each company would have an inducement to practise economy in expense, and to increase its efficiency in whatever manner this was possible. The price of the service under such conditions would be a reflection of the most efficient producing unit.

The state might, theoretically, make just as scientific rates as is now done by private organizations and the companies, but those who argue for the assumption of such a function by the state should be able to answer clearly two questions: First, what are the grounds for the state's thus invading the field of private business? What is the nature of the public injury threatened which under our theory of government would justify this extension of its functions? Second, what assur-

ance can be given that under such a system due consideration will be given to that wider basis of rating which is necessary to secure fair rates for all? Would not state interest demand that undue consideration be given fire losses in the particular state?

Further, since insurance is so completely a subject for state regulation, it may be asked what can be gained by a system of state rating which could not equally as well be secured by a proper supervision of rating.

Summing up, we may say that the public is primarily interested in the fire insurance contract in order to assure the buyer of insurance that the seller is able to fulfill his part of the contract. This interest is peculiarly justified by the fact that the buyer has no satisfactory means of determining the solvency of the insurance company. The thing sold, that is, indemnity, has no tangible expression by which the buyer can judge its quality. This fact is also the basis for the present agitation for the enactment of laws which will give to a public official the power to supervise the organization of companies, the sale of their stock, and their liquidation in case of insolvency. The state may also properly supervise rates in order to secure equitable charges for all purchasers of insurance. The working of competition will probably prevent excessive returns for the service rendered as a whole, but it cannot prevent discrimination between individuals and classes of property.

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